Road S22-0.44-0.88, High Priority Road Removal

EXISTING CONDITIONS AND PROJECT GOALS:
Road S22.0 between mile markers 0.44 and 0.88 (see Location Map, Plan Sheet 2) traverses a steep slopes within a debris slide amphitheater. This segment of road parallels a Class III watercourse that lies about 100 feet downslope, and the end of the road is approximately 300 feet from Big River. The road is very steep in places, continuously rilled throughout its length, and the existing waterbars have failed. In addition, several portions of the fillslope and cutslope along this road have failed delivering sediment downslope. This segment of road is considered a high priority restoration site because of its location within a steep debris slide amphitheater and its close proximity to watercourses, the continuity of the rills and the resultant hydrologic connection between subwatersheds, and because of illegal use and erosion by motorcycles. The California Department of Parks and Recreation (DPR) is removing this segment of road primarily by partial recontouring. In addition to the partial recontouring, drainage improvements will be constructed along Road S22.0 from 0.0 to 0.44 to better control runoff conveyed along the inside ditch. Specific goals of the entire project include:

- elimination of inter-basin transfers of runoff caused by rills and gullies in the road;
- restoration of primary topographic features that affect broad runoff patterns; and
- reduction in the erosion and mass wasting of the roadway fillslopes and cutslopes.

TASK DESCRIPTIONS FOR WORK ALONG ROAD S22.0
The full set of plans for the proposed work includes the following plan sheets and a booklet titled: *Standard Specifications & Best Management Practices for Disturbed Lands Remediation*. These plan sheets alone are insufficient to guide the proposed work.

0+00 to 0+60 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 150 cubic yards); grade excavated slope to 3:1 (horizontal:vertical), and transition (blend) excavated slopes to match existing fillslopes to the north and south; reduce S20.0 roadway surface width to 16 feet and outslope 5 percent; place and compact (Specifications item 4.03) excavated materials against cutslope beginning at station 0+80 and continuing upsection; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07).

0+80 to 2+25 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 285 cubic yards); place and compact (Specifications item 4.03) excavated materials against cutslope; obliterate road; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07). Between 0+80 and 1+30, push and compact (Specifications item 4.03) excavated material into road to effectively block access to off-road motorcycles and all-terrain vehicles. Save large wood and slash for placement at this location as an additional barrier to motorized vehicles. Also, make sure area of curve between 1+60 and 2+20 is sufficiently filled to reestablish broad pattern of landscape drainage (i.e., small spur).

2+25 to 6+70 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 1,235 cubic yards); place and compact (Specifications item 4.03) excavated materials against cutslope; obliterate road; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07). Note that little material will be excavated between 3+50 and 4+80 because of previous fillslope failures.

6+70 to 10+00 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 800 cubic yards); place and compact (Specifications item 4.03) excavated materials against cutslope; obliterate road; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07). In particular, make sure this area is sufficiently re-countoured to restore broad pattern of landscape drainage (i.e., drainage swale). Push excess material to turn between sections 11+50 and 12+00.

10+00 to 11+50 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 240 cubic yards); place and compact (Specifications item 4.03) excavated materials against cutslope; obliterate road; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07). Note that little material will be excavated between 10+20 and 11+50 because of previous fillslope failures. Pushing excavated material to turn between stations 11+50 and 12+00 as this area has to be built up to restore broad pattern of landscape drainage (i.e., small spur ridge).

11+50 to 12+00 After brushing and ripping (Specifications items 5.01 and 5.02), fill, compact (Specifications item 4.03), and shape this curve to restore broad pattern of landscape drainage (i.e., small spur ridge); finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07).

12+00 to 13+00 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 195 cubic yards); place and compact (Specifications item 4.03) excavated materials against cutslope; obliterate road; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07). Push excavated material to turn between stations 11+50 and 12+00 as this area must be built up to restore broad pattern of landscape drainage (i.e., small spur ridge).

13+00 to 15+30 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 250 cubic yards); place and compact (Specifications item 4.03) excavated materials against cutslope and fill through-cut between stations 14+30 and 15+30 (through-cut estimated to require 270 cubic yards); finish grade and mulch disturbed areas

15+40 to 15+60 This is the location of a persistent roadway seep. Excavate the fillslope through this sections but do not place the fill on the cutbench; outslope the cutbench through this section to provide controlled drainage for the seep.

15+30 to 18+50 After brushing and ripping (Specifications items 5.01 and 5.02), excavate and remove existing fillslope (approximately 240 cubic yards) from between 15+30 and 17+00; place and compact (Specifications item 4.03) excavated materials against cutslope and in through-cut area between sections 17+30 and 18+50; obliterate road; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07). Place and compact excavated material into road/skid trail intersection to effectively block access to off-road motorcycles and all-terrain vehicles. Save large wood for placement at this location as an additional barrier to motor vehicles.

18+50 to 19+00 Rip, modify, and fill to the extent possible this through-cut section and grade to match surrounding slopes; finish grade and mulch disturbed areas (Specifications items 5.06 and 5.07). Push, place, and compact (Specifications item 4.03) excavated material into the through-cut to effectively block access to off-road motorcycles and all-terrain vehicles. Save large wood and slash for placement at this location as an additional barrier to motor vehicles.

18+50 to 20+30 Fill and obliterate inside ditch; outslope (5% minimum) roadway intersection area to drain East into Area A.

A0+25 to A0+60 Construct Cross Road Drain and energy dissipater (Specifications items 4.05 and 4.08) to convey water from inside ditch to Area A

A0+00 to A2+00 Outslope roadway curve/intersection a minimum of 5 percent to drain East into Area A.

20+00 to 40+00 (gate near intersection with Comptche-Ukiah Road) Clear existing inside ditch of vegetation and accumulated sediment and construct 20 Cross Road drains and energy dissipaters (Specifications items 4.05 and 4.08) at 100-foot intervals.

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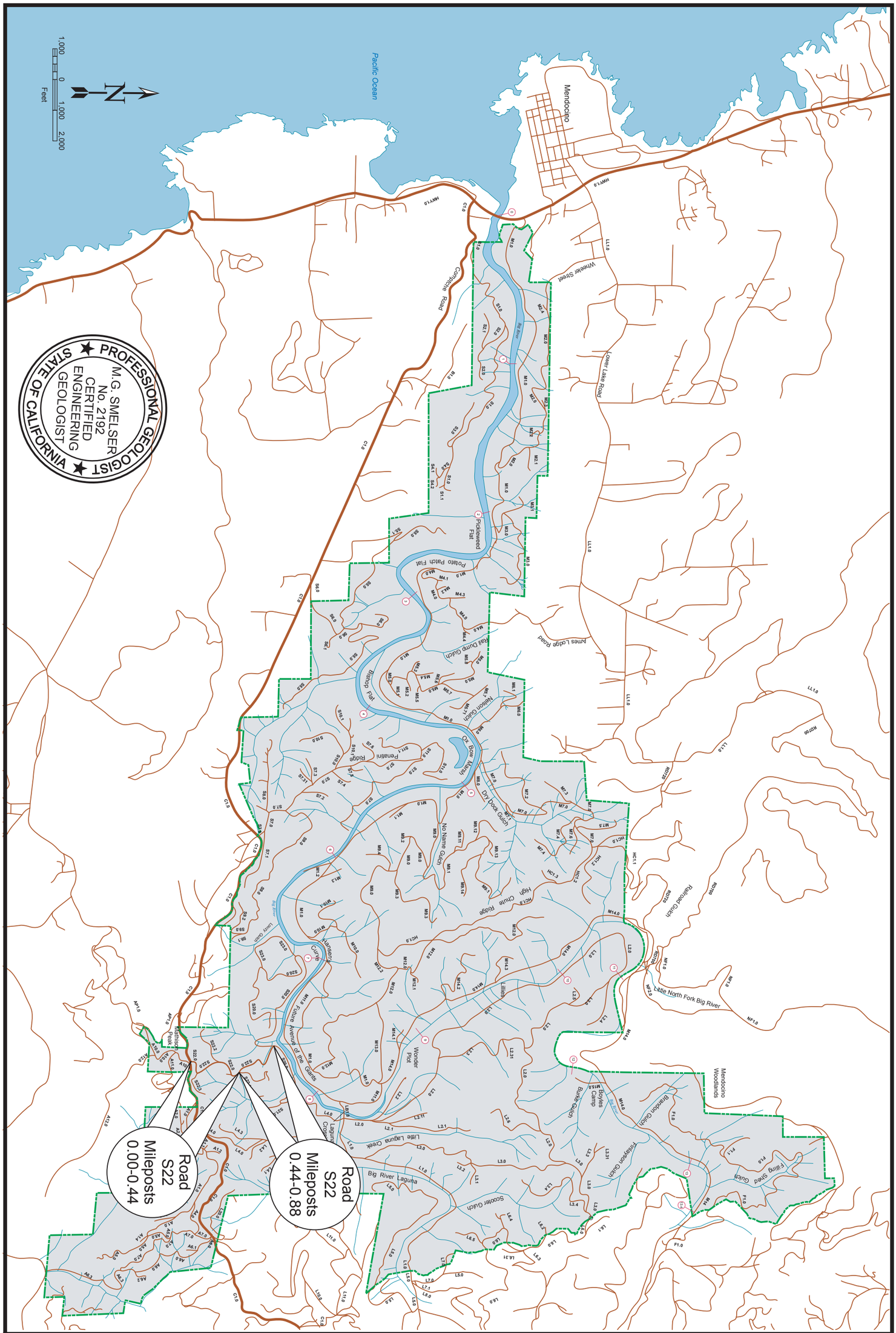
SHEET: 1 of 8

TITLE: Plan Sheet 1, Project Description and Tasks

SCALE: none

DATE: February 28, 2006

PROJECT:
Road S22-0.44-0.88, High Priority Road Removal
Big River Unit
Mendocino Headlands State Park, Mendocino, CA



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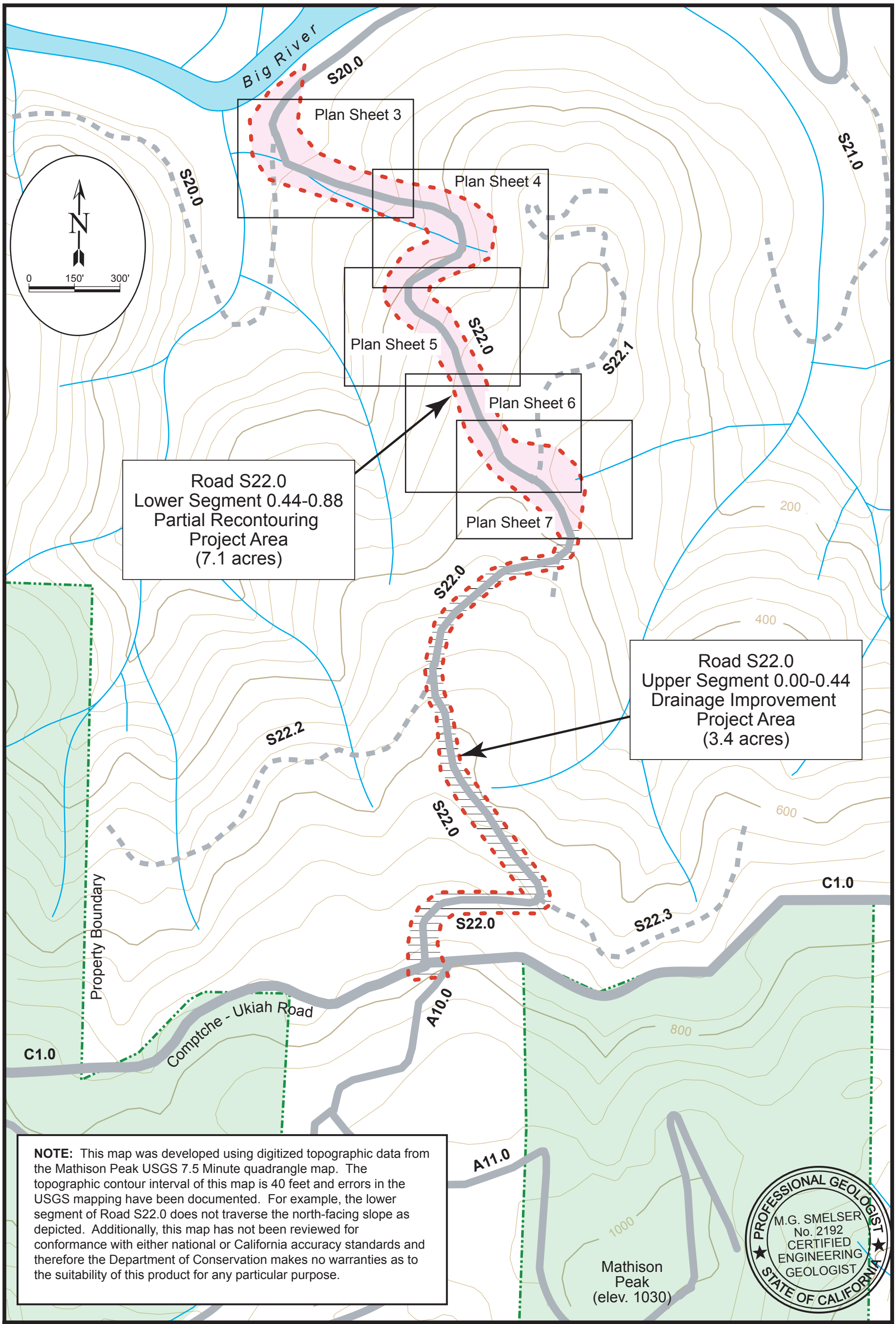
PROJECT: Road S22-0.44-0.88, High Priority Road Removal Big River Unit Mendocino Headlands State Park, Mendocino, CA	TITLE: Plan Sheet 2, Location Map Showing Road Segment S22-0.00 to 0.88 SCALE: 1 inch = 3,000 feet DATE: February 28, 2006	SHEET: 2 of 8



NOTE: This map was developed using digitized topographic data from the Mathison Peak USGS 7.5 Minute quadrangle map. The topographic contour interval of this map is 40 feet and errors in the USGS mapping have been documented. For example, the lower segment of Road S22.0 does not traverse the north-facing slope as depicted. Additionally, this map has not been reviewed for conformance with either national or California accuracy standards and therefore the Department of Conservation makes no warranties as to the suitability of this product for any particular purpose.

CALIFORNIA GEOLOGICAL SURVEY
CALIFORNIA CONSERVATION

PROJECT:
Road S22-0.44-0.88 High Priority Road Removal
Big River Unit
Mendocino Headlands State Park, Mendocino, CA

TITLE: Plan Sheet 3, Topography and Index to Plan Sheets

SCALE: 1 inch = 300 feet

DATE: February 28, 2006

SHEET: 3 of 8

Big River

Road S20.0

0+00

0+50

1+00

1+50

2+00

2+50

3+00

3+50

4+00

4+50

5+00

5+50

6+00

af

RP 61

RP 110

RP 190

RP 490

Road Grade
0+00 to 0+80
generally flat

sediment fan

Road Grade
0+80 to 1+80
23% = 13°

Native Slope
70% = 35°

Skid Trail?

Road S22.0

Limits of Project Grading

Native Slope
90% = 42°

area of overlap with Plan Sheet 5

Native Slope
80% = 38.7°

shallow cutslope fa

Limits of Project Grading

Road Grade
1+80 to 4+00
20% = 11.3°

Shallow debris slides/
fillslope failure(s)

Road Grade
4+00 to 5+45
15% = 8.5°

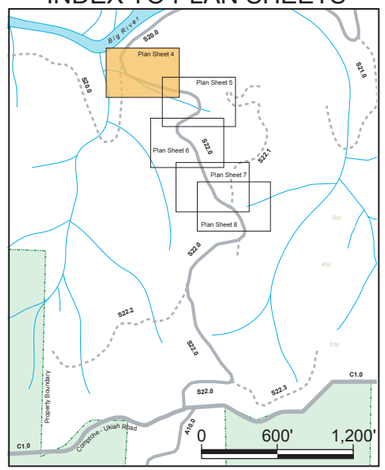
Road Grade
5+45 to 6+95
20% = 11.3°

Road S20.0 (overgrown)

N

0 20' 40'

INDEX TO PLAN SHEETS



EXPLANATION OF MAP SYMBOLS

RP 490

Reference points (RP) - half-inch diameter rebar stakes that are approximately 3 feet long and typically embedded 2.5 feet into the ground.

Waterbreak/Water Bar - small trench and mound constructed to interrupt and divert runoff flowing down the road; most are partially filled with sediment, broken down, and are no longer diverting runoff.

top toe **Cutslope**

top toe **Fillslope**

5+50 6+00 **Project Stationing**

Rill in Roadway

Tributary Watercourse

Approximate Location of Contact Between Fill and Native Earth Materials

Road S22.0 Travel Path

Skid Trail

Other Roads

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SHEET: 4 of 8

TITLE: Plan Sheet 4, Stations 0+00 to 5+00

SCALE: 1 inch = 40 feet

DATE: February 28, 2006

PROJECT:
Road S22-0.44-0.88, High Priority Road Removal
Big River Unit
Mendocino Headlands State Park, Mendocino, CA

CALIFORNIA GEOLOGICAL SURVEY
CALIFORNIA CONSERVATION

area of overlap with Plan Sheet 4

RP 490

Native Slope
80% = 38.7°

shallow cutslope failure

5+00

5+50

6+00

6+50

af

Road Grade
5+45 to 6+95
20% = 11.3°

Native Slope
85% = 40.4°

RP 700

Native Slope
72% = 35.8°

Limits of Project Grading

RP 755

7+00

7+50

Road Grade
6+95 to 7+45
23% = 13°

Native Slope
70% = 35°

8+00

Road Grade
7+45 to 8+30
20% = 11.3°

Skid Trail?

Skid Trail

8+50

RP 867

af

9+00

RP 915

Road Grade
8+30 to 11+60
20% = 11.3°

9+50

af

10+00

Native Slope
50% = 26.6°

10+50

Native Slope
88% = 41.3°

RP 1050

11+00

Native Slope

area of overlap with Plan Sheet 6

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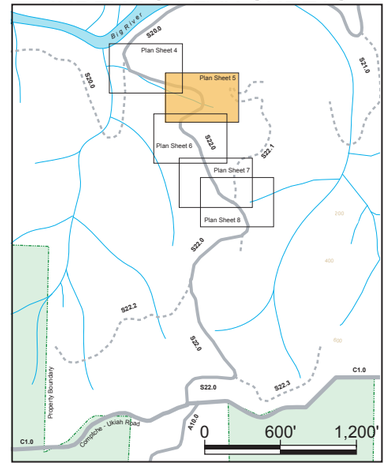
N

0 20' 40'

INDEX TO PLAN SHEETS



EXPLANATION OF MAP SYMBOLS

Reference points (RP) - half-inch diameter rebar stakes that are approximately 3 feet long and typically embedded 2.5 feet into the ground.

Waterbreak/Water Bar - small trench and mound constructed to interrupt and divert runoff flowing down the road; most are partially filled with sediment, broken down, and are no longer diverting runoff.

Cutslope

Fillslope

Project Stationing

Rill in Roadway

Tributary Watercourse

Approximate Location of Contact Between Fill and Native Earth Materials

Road S22.0 Travel Path

Skid Trail

Other Roads

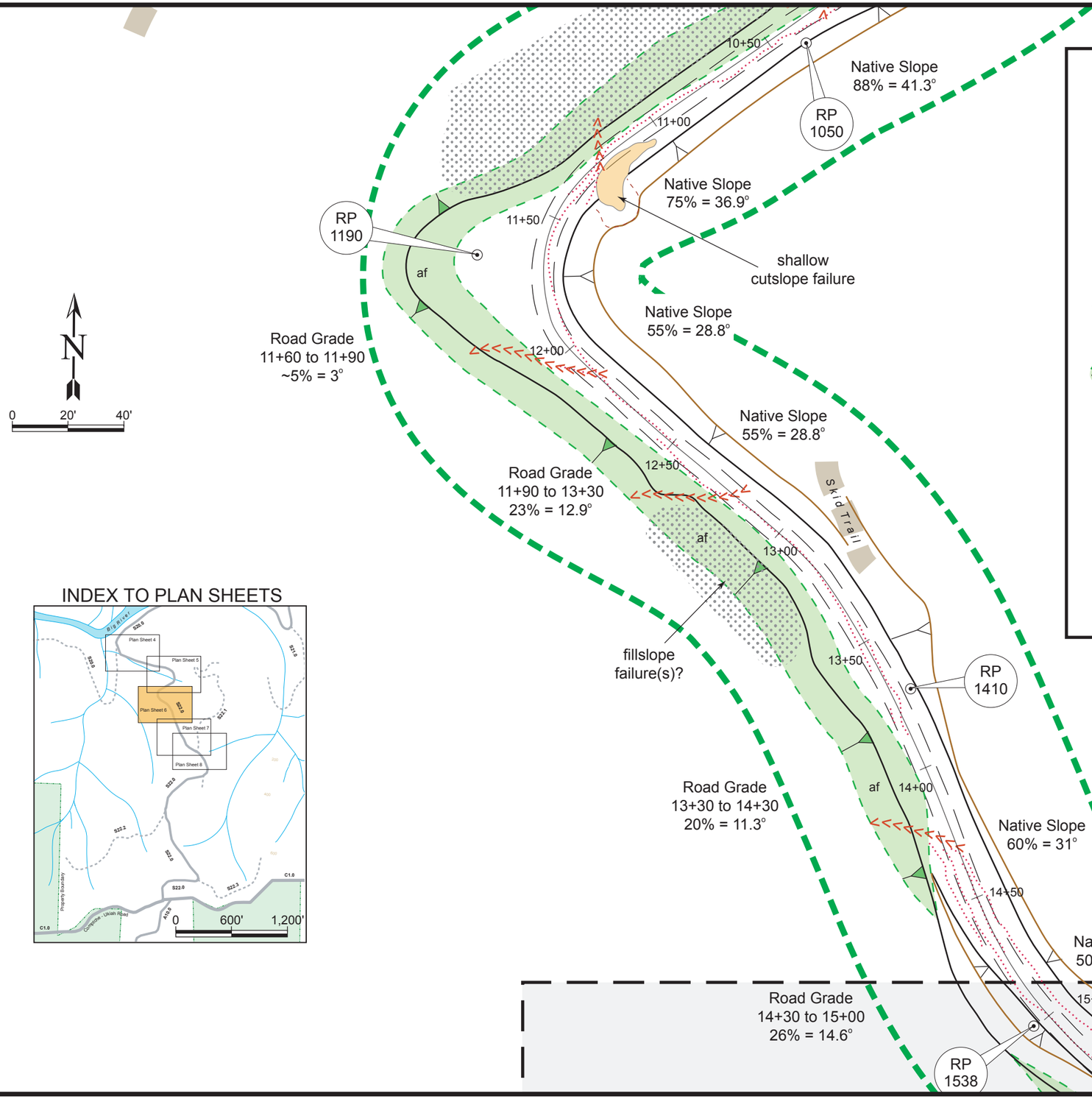
SHEET: 5 of 8

TITLE: Plan Sheet 5, Stations 5+00 to 11+00

SCALE: 1 inch = 40 feet

DATE: February 28, 2006

PROJECT:
Road S22-0.44-0.88, High Priority Road Removal
Big River Unit
Mendocino Headlands State Park, Mendocino, CA



EXPLANATION OF MAP SYMBOLS

Reference points (RP) - half-inch diameter rebar stakes that are approximately 3 feet long and typically embedded 2.5 feet into the ground.

Waterbreak/Water Bar - small trench and mound constructed to interrupt and divert runoff flowing down the road; most are partially filled with sediment, broken down, and are no longer diverting runoff.

Cutslope

Fillslope

Project Stationing

Rill in Roadway

Tributary Watercourse

Approximate Location of Contact Between Fill and Native Earth Materials

Road S22.0 Travel Path

Skid Trail

Other Roads

INDEX TO PLAN SHEETS

SHEET: 6 of 8

TITLE: Plan Sheet 6, Stations 11+50 to 15+30

SCALE: 1 inch = 40 feet

DATE: February 28, 2006

PROJECT:
Road S22-0.44-0.88, High Priority Road Removal
Big River Unit
Mendocino Headlands State Park, Mendocino, CA

area of overlap with Plan Sheet 6

Road Grade
14+30 to 15+00
26% = 14.6°

RP 1538

15+00

seep

15+50

RP 1630

Road Grade
15+00 to 15+90
21% = 11.9°

af

16+00

Native Slope
40% = 22.0°

Road Grade
15+90 to 16+80
23% = 12.9°

Native Slope
58% = 30.0°

16+50

Limits of
Project Grading

af

17+00

Native Slope
is generally flat

Road Grade
16+80 to 17+70
~5% = 3°

17+50

RP 1803

af

18+00

Native Slope
is generally flat

Road Grade
17+70 to 18+75
24% = 13.5°

RP 1896

18+50

Road Grade
at intersection
is generally flat

A2+00

A1+50

break in
slope

19+00

Road S22.1

A1+00

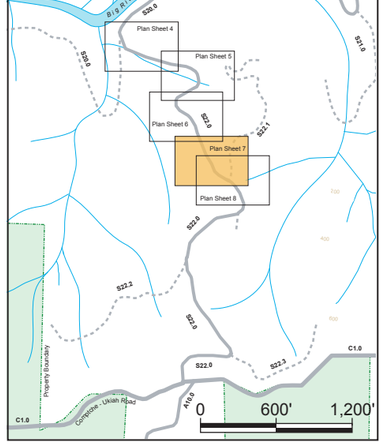
Road Grade
18+75 to 19+25
~5% = 3°

19+50

RP 1971

0 20' 40'

INDEX TO PLAN SHEETS



EXPLANATION OF MAP SYMBOLS

RP 490

Reference points (RP) - half-inch diameter rebar stakes that are approximately 3 feet long and typically embedded 2.5 feet into the ground.

Waterbreak/Water Bar - small trench and mound constructed to interrupt and divert runoff flowing down the road; most are partially filled with sediment, broken down, and are no longer diverting runoff.

top toe **Cutslope**

top af toe **Fillslope**

5+50 6+00 **Project Stationing**

Rill in Roadway

Tributary Watercourse

Approximate Location of Contact Between Fill and Native Earth Materials

Road S22.0 Travel Path

Skid Trail

Other Roads

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SHEET: 7 of 8

TITLE: Plan Sheet 7, Stations 15+00 to 19+50

SCALE: 1 inch = 40 feet

DATE: February 28, 2006

PROJECT:
Road S22-0.44-0.88, High Priority Road Removal
Big River Unit
Mendocino Headlands State Park, Mendocino, CA

CALIFORNIA CONSERVATION

af
17+00
Native Slope
is generally flat
Road Grade
16+80 to 17+70
~5% = 3°
17+50
RP
1803
af
18+00
Native Slope
is generally flat
A2+00
Road S22.1
RP
1896
Road Grade
17+70 to 18+75
24% = 13.5°
18+50
Road Grade
at intersection
is generally flat
A1+50
19+00
break in
slope
Area A
(flat area w/
much roughness)
A1+00
Road Grade
18+75 to 19+25
~5% = 3°
19+50
RP
1971
Road S22.0
A0+50
20+00
A0+00
20+50
inside ditch
21+00
Limits of
Project Grading
Lower Segment
Project Area
(0.44 to 0.88)
Upper Segment
Project Area
(0.00 to 0.44)
21+50

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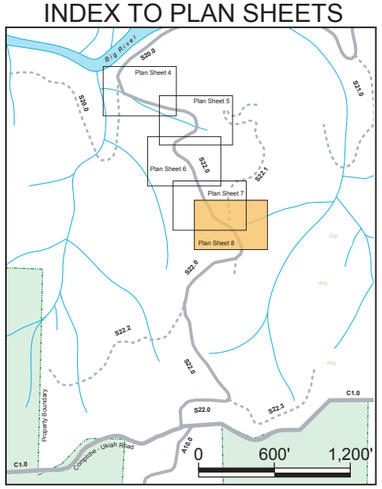

N

0 20' 40'

EXPLANATION OF MAP SYMBOLS

RP 490

Reference points (RP) - half-inch diameter rebar stakes that are approximately 3 feet long and typically embedded 2.5 feet into the ground.

Waterbreak/Water Bar - small trench and mound constructed to interrupt and divert runoff flowing down the road; most are partially filled with sediment, broken down, and are no longer diverting runoff.

top toe **Cutslope**

5+50 6+00 **Project Stationing**

top af toe **Fillslope**

Rill in Roadway

Tributary Watercourse

Approximate Location of Contact Between Fill and Native Earth Materials

Road S22.0 Travel Path

Skid Trail

Other Roads

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SHEET: 8 of 8

TITLE: Plan Sheet 7, Stations 18+50 to 40+00

SCALE: 1 inch = 40 feet

DATE: February 28, 2006

PROJECT:
Road S22-0.44-0.88, High Priority Road Removal
Big River Unit
Mendocino Headlands State Park, Mendocino, CA

CALIFORNIA CONSERVATION